

Notice of Allowability

Application No.

10/684,601

Examiner

Vickey Ronesi

Applicant(s)

GUERIN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed on 2/16/07.
2. ☒ The allowed claim(s) is/are 1-7.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>2/16/07</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on 2/16/2007 has been entered.

Statement of Reasons for Allowance

The present claims are allowable over the closest prior art Oyama et al (US 5,651,995), Fujii et al (US 6,489,385), Fuji (EP 0 972,797, cited on IDS filed on 2/16/2007), and Musch et al (US 5,187,232, cited on IDS filed on 2/16/2007) for the following reasons:

The present claims are drawn to a polymer composite consisting of at least optionally hydrogenated, nitrile rubber polymer having a Mooney viscosity in the range of from 50-30 and a polydispersity index of less than 2.7, at least one filler, and optionally at least one cross-linking agent, wherein the nitrile rubber is prepared by a metathesis reaction in the presence of one or more metathesis catalysts of Formula I, II, III, or IV.

Oyama et al discloses a vulcanized rubber composition comprising a nitrile group-containing copolymer rubber having a Mooney viscosity of 30-100 and a Mw/Mn of 2.3-5.5; sulfur or peroxide vulcanizing systems; and fillers—wherein the composition is injected molded to make articles such as gaskets, seals, belts, etc. While Oyama et al discloses a nitrile group-containing copolymer rubber having a Mooney viscosity and Mw/Mn that overlaps with the presently claimed ranges, Oyama et al's rubber has an alkylthio group having 12-16 carbon

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atoms (see claim 1) which results in a chemical difference from the presently claimed metathesis-catalyzed rubber.

Fujii et al (US 6,489,385) discloses a composition comprising a nitrile group-containing nitrile rubber having a viscosity ranging from 5-135, preferably 20-90, with a polydispersity (Mw/Mn) of 3-5 and various other components such as vulcanizing agents and fillers. While Fujii et al discloses a nitrile group-containing nitrile rubber having a Mooney viscosity that overlaps with the presently claimed range and a Mw/Mn that is close enough to the presently claimed range of less than 2.7, Fujii et al's rubber is reacted with an aging inhibitor (col. 3, lines 21-36) which results in a chemical difference from the presently claimed methathesis-catalyzed rubber.

Fujii (EP 0 972 797) discloses a composition comprising a nitrile group-containing nitrile rubber having a viscosity ranging from 5-135 with a polydispersity (Mw/Mn) of 3.0 to 5.0 and various other components such as vulcanizing agents and fillers. While Fujii discloses a nitrile group-containing rubber having a Mooney viscosity that overlaps with the presently claimed range and a Mw/Mn that is close enough to the presently claimed range of less than 2.7, Fujii's rubber is prepared by applying a high shearing force in the presence of an antioxidant which reacts with rubber radicals during chain scission and results in a chemical different from the presently claimed methathesis-catalyzed rubber.

Musch et al discloses a composition comprising a hydrogenated nitrile rubber having a Mooney viscosity of 10-150 (col. 2, line 46), vulcanizing agents and fillers (col. 2, lines 54-66); however, Musch et al fails to disclose or suggest a polydispersity of 2.7.

Thus, it is clear that Oyama et al and Fujii et al do not disclose or suggest the claimed invention.

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The terminal disclaimer filed on 10/24/2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,780,939 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Further, two provisional obviousness-type double patenting rejections over later-filed U.S. application 10/728,029 (published as US 2004/0132891) and same-day filed U.S. application 10/684,867 (published as US 2004/0113320) had been set forth; however, per USPTO practice, given that the obviousness-type double patenting rejections would be the only rejections remaining in this application as provisional rejections over copending applications, these obviousness-type double patenting rejections are withdrawn.

In light of the above, it is clear that rejections of record are untenable and thus the present claims are passed to issue.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/8/2007

Vickey Ronesi



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